



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Georges Marcel Victor Thielen.

For: RUNFLAT TIRE HAVING A

RUBBERIZED INSERT CONTAINING

1,6-BIS(N,N'-

DIBENZYLTHiocarbamoyldithio)-

HEXANE

Serial No.: 09/912,865

Filed: July 25, 2001

) Docket No. DN2000147

) Art Unit: 1733

) Examiner: Justin Fischer

#7100
10/23/03

RECEIVED

OCT 22 2003

TC 1700

Assistant Commissioner for Patents
Alexandria, VA 22313-1450

DECLARATION UNDER 37 C.F.R. SECTION 1.132

Dear Sir:

I, Georges Marcel Victor Thielen, do declare as follows:

1. I was awarded a Ph.D degree in chemistry from Univ. Hanover, Germany, in 1991. Since 1991, I have been employed by The Goodyear Tire & Rubber Company in the field of rubber and rubber compounding research. As a result of my work at Goodyear, I have been named as an inventor or co-inventor on 7 U.S. Patents relating to rubber and rubber compounding. I am the sole inventor of the current application.

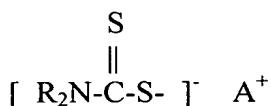
2. I have read and understood U.S. Patent No. 5,871,600. The term "dithiocarbamate accelerators" as used in U.S. Patent No. 5,871,600 refers to the dithiocarbamate accelerators commonly used in rubber compositions. These dithiocarbamate accelerators include metal dithiocarbamates and dithiocarbamate salts, which are described in The Vanderbilt Rubber Handbook, Thirteenth Edition, pages 303-315. Among these

accelerators are included bismuth dimethyldithiocarbamate, Butyl Eight, cadmium diethyldithiocarbamate, copper dimethyldithiocarbamate, lead diamyldithiocarbamate, lead dimethyldithiocarbamate, selenium diethyldithiocarbamate, selenium dimethyldithiocarbamate, tellurium diethyldithiocarbamate, piperidinium pentamethylene dithiocarbamate, zinc diamylthiocarbamate, zinc diethyldithiocarbamate, and zinc dimethyldithiocarbamate, and the like.

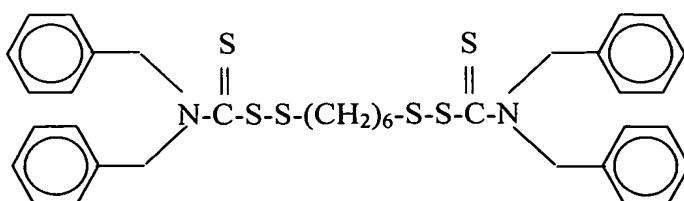
3. The dithiocarbamate accelerators listed in paragraph 2 are all metal dithiocarbamates, wherein multiple dithiocarbamyl moieties are linked via a central metal atom, or dithiocarbamate salts, wherein one or more dithiocarbamate anions are ionically linked to a cation. For a divalent metal Me for example, a metal dithiocarbamate would have the structure



and a salt with a monovalent cation A^+ would have the structure



4. The material utilized in the present invention is 1,6-bis(N,N'-dibenzylthiocarbamoyldithio)-hexane. This material has the structure



wherein the dithioalkanediyl moiety -S-(CH₂)₆-S- is covalently bonded through each sulfur to a sulfur in each of the dithiocarbamyl groups.

5. In use, the dithioalkanediyl moiety -S-(CH₂)₆-S- provides stable, reversion-resistant sulfur linkages in a rubber vulcanizate through the reaction of the 1,6-bis(N,N'-dibenzylthiocarbamoyldithio)-hexane during rubber vulcanization. By contrast, dithiocarbamate accelerators do not contain a dithioalkanediyl moiety and do not provide such a crosslinking function. Based on this difference, 1,6-bis(N,N'-dibenzylthiocarbamoyldithio)-hexane is not included in the category of dithiocarbamate accelerators.

6. The undersigned declares further that all statements made herein of his own knowledge are true and that all statements made on information and belief are believed to be true and further that these statement are made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Dated: October 9, 2003

Georges Marcel Victor Thielen
Georges Marcel Victor Thielen